COMAROCYSTITES AND CARYOCRINITES.
CYSTIDS WITH PINNULIFEROUS FREE ARMS.

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13. *The structure of the thecal plates.*—The exterior surface of the thecal plates of *Comarocystites punctatus* is deeply concave. The interior surface, however, appears more or less stellately convex. The convex appearance is due, in part, to the slopes of the suture planes, converging toward the center of the theca, and, in part, to the thinning of the plates toward the angles of their polygonal outlines. The stellate character is due to grooves separating the different sets of mesostereom plates, described later in this paragraph. These grooves narrow toward the angles, thus increasing the stellate appearance.

In cross-sections which are vertical to the surface of the thecal plates and perpendicular to the middle parts of the sutures between the plates, the inner surface of the plates presents an almost straight outline between the center of one plate and the center of the next, or there is a moderate outward bending of this outline at the suture. However, toward the angles where three plates meet, the inner surface of the plates curves so strongly outward as to produce the appearance of deep triangular pits at these points of junction. Owing to the deep concavity of the exterior surface of the plates, the thickness of these plates varies from five-tenths to six-tenths of a millimeter at the center to nearly two millimeters along the middle of the suture lines. Toward the angles, however, where three plates meet, and where the inner surface of the plates curves strongly outward, so as to approach the outer surface, the thickness of the plates frequently is reduced to about a quarter of a millimeter. Viewed from the interior of the theca, with the plates still connected, the deep triangular pits or depressions between the ends of the stellate rays characterizing the individual plates, form the most striking features.